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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,703	10/17/2003	Atsushi Koshizaka	056203.52848US	8816

23911 7590 06/29/2006

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EXAMINER

CONTEE, JOY KIMBERLY

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,703

Applicant(s)

KOSHIZAKA ET AL

Examiner

Joy K. Contee

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10/17/03.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirabayashi et al. (Hirabayashi), US 2003/0151477.

Regarding claim 1, Hirabayashi discloses a high-frequency transceiver apparatus, wherein an antenna substrate made of a dielectric material and having an antenna conductor pattern formed thereon is bonded onto one surface of a base plate to transmit and receive a high frequency wave signal, and the flatness accuracy of a surface of said antenna substrate is set at $\lambda/20$ or less when λ denotes effective wavelength (pages 4-8 [0059-0099]).

Regarding claim 2, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 1, wherein a high-frequency circuit substrate made of a dielectric material and forming a transceiver circuit is provided on the other surface of said base plate(pages 4-8 [0059-0099]).

Regarding claim 3, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 2, wherein said transceiver circuit includes a circuit

conductor pattern formed on the surface of said high-frequency circuit substrate and a semiconductor chip connected to said circuit conductor pattern, and said antenna conductor pattern is arranged as connected with a plurality of patch antenna elements (pages 4-8 [0059-0099]).

Regarding claim 4, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 2, wherein said antenna substrate and said high-frequency circuit substrate are integrally formed for transmission and reception(pages 4-8 [0059-0099]).

Regarding claim 5, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 3, wherein a cover having a radio wave absorber is mounted on a surface of said base plate having the high-frequency circuit substrate mounted thereon(pages 4-8 [0059-0099]).

Regarding claim 6, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 5, wherein a projection is formed in the other surface of said base plate so as to surround a periphery of the high-frequency circuit substrate, and said cover having said radio wave absorber is mounted on an upper face of said projection(pages 4-8 [0059-0099]).

Regarding claim 7, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 1, wherein an effective wavelength frequency is any frequency in a range from 76 to 77 GHz(pages 4-8 [0059-0099]).

Regarding claim 8, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 3, wherein said semiconductor chip is made of a

compound of Ga and As, and said high-frequency circuit substrate is air-tightly sealed by joining the cover thereto(pages 4-8 [0059-0099]).

Regarding claim 9, Hirabayashi discloses high-frequency transceiver apparatus as set forth in claim 1, wherein said base plate is formed by press processing.

Regarding claim 10, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 9, wherein a surface of said base plate onto which said antenna substrate is to be bonded is subjected to annealing operation to remove distortion(pages 4-8 [0059-0099]).

Regarding claim 11, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 6, wherein said base plate is manufactured by shaping a metallic plate work into a plate having dimensions corresponding nearly to an outer periphery of the projection, shaping said shaped plate into a plate having dimensions corresponding nearly to an inner periphery of said projection inside the projection, annealing said shaped plate to remove distortion, and then shaping the cover mounting face of said projection(pages 4-8 [0059-0099]).

Regarding claim 12, Hirabayashi discloses a high-frequency transceiver apparatus to be mounted on a car, wherein an antenna substrate having an antenna conductor pattern formed thereon as connected with a plurality of patch antenna elements is bonded onto one surface of a base plate, a high-frequency circuit substrate including a circuit conductor pattern and a semiconductor chip connected to said circuit conductor pattern is provided on the other surface of said base plate, said antenna substrate and said high-frequency circuit substrate are integrally formed for

transmission and reception, a projection is formed on the other surface of said base plate so as to surround said high-frequency circuit substrate, a cover having a radio wave absorber is mounted on an upper face of said projection, said high-frequency transceiver apparatus for transmitting and receiving a high frequency wave signal is used for the purpose of detecting a distance between cars, and a flatness accuracy of a surface of said antenna substrate of the high-frequency transceiver apparatus is set at $\lambda/20$ or less when λ denotes effective wavelength, and an effective frequency of the high-frequency transceiver apparatus is set at any frequency in a range from 76 to 77 GHz.(pages 4-8 [0059-0099]).

Regarding claim 3, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 12, wherein said base plate is formed by press processing (pages 4-8 [0059-0099]).

Regarding claim 14, Hirabayashi discloses the high-frequency transceiver apparatus as set forth in claim 12, wherein said base plate is manufactured by shaping a metallic plate work into a plate having dimensions corresponding nearly to an outer periphery of the projection, shaping said shaped plate into a plate having dimensions corresponding nearly to an inner periphery of said projection inside the projection, annealing said shaped plate to remove distortion, and then shaping the cover mounting face of said projection(pages 4-8 [0059-0099]).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 2617


Chang et al. US 2002/0149107 discloses a method of making a flexible substrate containing self-assembling microstructures.

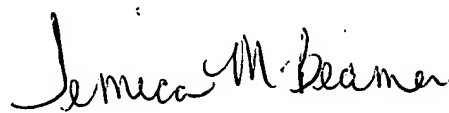
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joy K. Contee whose telephone number is 571.272.7906. The examiner can normally be reached on Monday through Friday, 5:30 a.m. to 2:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571.272.7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JC


JOY K. CONTEE
PATENT EXAMINER


TEMICA BEAMER
PRIMARY EXAMINER